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ESTATE-CEMETERY  
PROBLEMS AND PLANS

# FISHERY MARKET NEWS

AUGUST 1940



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WASHINGTON



# FISHERY MARKET NEWS

R. H. Fiedler, Editor  
F. F. Johnson, Associate Editor



TECHNOLOGY - - J. M. Lemon  
STATISTICS - - E. A. Power

MARKET NEWS - - A. W. Anderson  
MARKETING - - Ralph Russell

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## TABLE OF CONTENTS

	Page
Summary.....	1
Trends of fishery trade.....	2
Some Notes on the Shrimp Packing Industry in the South Atlantic and Gulf States, by Andrew W. Anderson.....	3
Study of Alaska king crab undertaken.....	7
Some news of fishermen's cooperatives.....	7
United States grades immense quantities of meat.....	7
Wholesale and retail prices.....	8
New England vessel landings increase in June.....	8
Fish Pier landings of fish at Boston increase.....	9
Fisheries of Massachusetts.....	9
Fisheries of New Jersey.....	9
Fisheries of the South Atlantic area.....	10
Fishery industries of the Great Lakes.....	10
Chicago's receipts maintain lead over 1939.....	10
Pacific halibut fleet contributes half million dollars in fish livers.....	11
Fisheries of British Columbia, 1939.....	11
Fisheries of Nova Scotia in 1939.....	11
Fisheries of Prince Edward Island.....	11
Notes on Canadian cooperatives.....	12
Prince Edward Island cooperative cans mackerel.....	12
Icelanders eat fish on Monday.....	12
Japan centralizes control of fishery industries.....	13
Quarterly marine-animal oil trade.....	13
Frozen fish trade.....	13
United States cold-storage holdings continue to increase.....	13
Boston fish stocks in cold-storage make abrupt rise.....	14
Cold-storage stocks in New York increase.....	14
Chicago cold-storage holdings remain constant.....	15
Halibut and sea herring lead Canadian cold-storage items.....	15
Canned fish trade.....	15
United States canned fishery products and byproducts worth 130 million dollars in 1939.....	15
1940-41 shrimp canning starts slowly.....	16
Tuna canning maintains fast pace.....	16
Foreign fishery trade.....	17
Canned salmon exports lead foreign fishery trade.....	17
Canada restricts fish oil exports.....	17
The cover page.....	18
Fishery trade indicators.....	19

# FISHERY MARKET NEWS

A REVIEW OF CONDITIONS AND TRENDS OF THE COMMERCIAL FISHERIES

August 1940

Washington, D. C.

Vol. 2, No. 8

## SUMMARY

### Special Articles

Notes on the Shrimp Packing Industry.--The shrimp packing industry of the South Atlantic and Gulf States has been utilizing since 1935 a system of voluntary canning inspection provided by the Federal Government. Over 90 percent of the shrimp canned today is marked "Production Supervised by the U. S. Food and Drug Administration".

### Fresh Fish

June vessel landings of fresh fish at Boston, Gloucester, and Portland totaled 30,642,000 pounds, a 37 percent increase over the landings of May. The June landings were valued at \$737,500 to the fishermen, an increase of 10 percent compared with the May receipts.

At the Boston Fish Pier, 16,794,000 pounds of fish were sold in June, at an average of 3.09 cents per pound. A 16 percent increase in volume over the May total brought fishermen only a 1 percent increase in the value of the fish handled.

Receipts of 4,681,000 pounds of fish and fishery products were recorded at the Chicago Wholesale Fish Market in June.

### Frozen Fish

United States holdings of frozen fishery products totaled 56,420,000 pounds on July 15, an increase of 37 percent over the June 15 total and 4 percent in excess of the July 15, 1939, total. There were 24,963,000 pounds of fishery products frozen between June 15 and July 15, 8 percent more than those frozen in the previous month.

The distribution of a large part of the stocks of frozen fish and fishery products in the United States is indicated by market news reports of 12,378,000 pounds on hand in Boston, 5,732,000 pounds in New York City, and 3,451,000 pounds in Chicago the middle of the last week of July.

### Canned Fish

Canned fish valued at \$96,459,000 was packed in the United States in 1939. To this total, canned salmon contributed \$41,781,000, or 43 percent.

Tuna canning for 1940 through June was 12 percent more productive than in 1939 with 1,534,000 standard cases canned. Shrimp canning was slack and pilchard and mackerel canning was inactive.

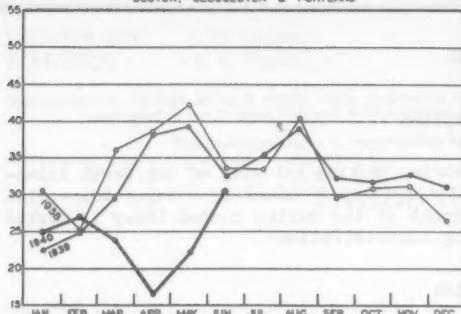
### Foreign Trade

Exports of 7,339,000 pounds and imports of 20,097,000 pounds combined in June to make trade in edible fishery commodities 7 percent less than that of June 1939. There were 4,333,000 pounds of canned salmon in the June exports, an increase of 350 percent over the June 1939 total.

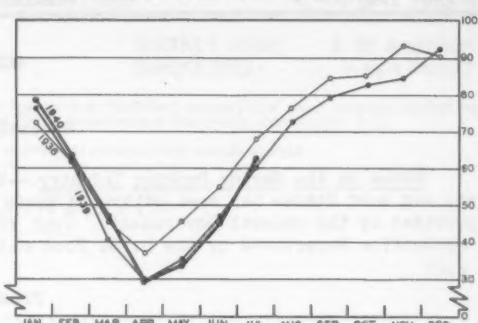
## TRENDS OF FISHERY TRADE

IN MILLIONS OF POUNDS

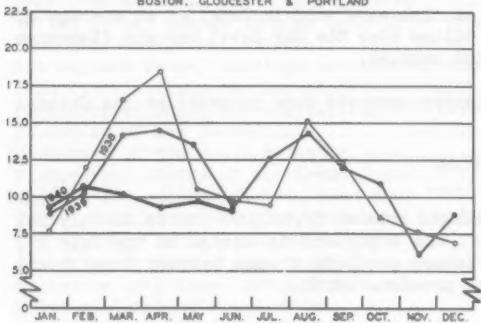
VESSEL LANDINGS, ALL FRESH FISH  
BOSTON, GLOUCESTER & PORTLAND



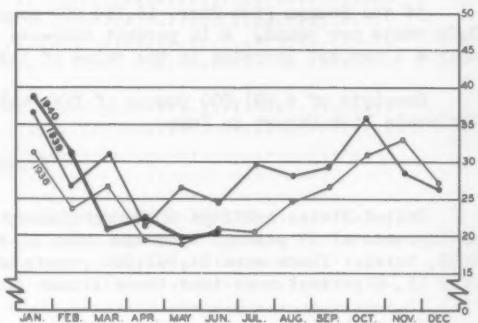
DOMESTIC COLD-STORAGE HOLDINGS OF FROZEN FISH



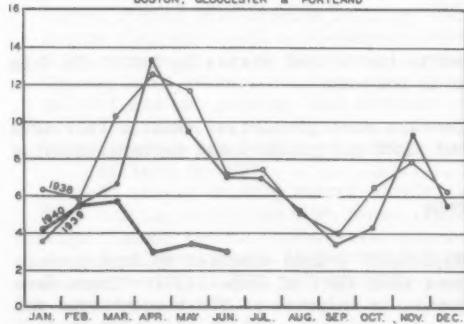
VESSEL LANDINGS, FRESH HADDOCK  
BOSTON, GLOUCESTER & PORTLAND



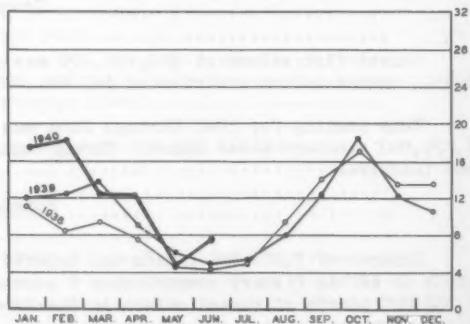
IMPORTS OF EDIBLE FISHERY COMMODITIES



VESSEL LANDINGS, FRESH COD  
BOSTON, GLOUCESTER & PORTLAND



EXPORTS OF EDIBLE FISHERY COMMODITIES



## SOME NOTES ON THE SHRIMP PACKING INDUSTRY IN THE SOUTH ATLANTIC AND GULF STATES

By Andrew W. Anderson, Fishery Marketing Specialist  
Division of Fishery Industries

Fish and Wildlife Service

Following a procedure that is unique in the domestic fish processing field, the shrimp canning industry of the South Atlantic and Gulf States has packed most of its products under Federal supervision since 1935. Whether or not the operation is a success may be answered by stating that although the supervision is permissive rather than mandatory over 90 percent of the million-case annual pack is prepared in Federally inspected plants and carries the phrase "Production Supervised by the U. S. Food and Drug Administration".

Formerly canned shrimp required considerable attention from the Food and Drug Administration's field force. During the 1933-34 season, for example, 483 samples from the output of 59 packers were examined. Of these samples, 68, the product of 26 packers, violated the Food and Drugs Act and were seized. Four years later the supervision of the production of the greater part of the pack had practically eliminated any need for seizing inspected shipments, and only 21 samples from shipments of uninspected plants were examined, four being seized as decomposed.

According to the Food and Drug Administration, canned shrimp demanded extensive attention prior to 1935 because of "(1) the packing of shrimp which had been carelessly handled or kept so long that decomposition set in; and (2) the use of inadequate processing temperatures so that spoilage occurred after the product had been canned." As a result of these seizures, Congress adopted an amendment to the Food and Drugs Act. It was approved June 22, 1934, and designated as section 10A. It is commonly known as the "Seafood Amendment". Originally the packer paid the full cost of the inspection, but on August 27, 1935, the amendment was changed, permitting Congress to appropriate funds to provide for part of the inspection costs. However, no appropriation was authorized until the 1936-37 season when \$40,000 was made available. The same amount has been appropriated each year since.

Section 10A, as approved August 27, 1935, and as incorporated in the new Federal Food, Drug, and Cosmetic Act, reads as follows:

"Sec. 10A. The Secretary of Agriculture, upon application of any packer of any seafood for shipment or sale within the jurisdiction of this Act, may, at his discretion, designate inspectors to examine and inspect such food and the production, packing, and labeling thereof. If on such examination and inspection compliance is found with the provisions of this Act and regulations promulgated thereunder, the applicant shall be authorized or required to mark the food as provided by regulation to show such compliance. Services under this section shall be rendered only upon payment by the applicant of fees fixed by regulation in such amounts as may be necessary to provide, equip, and maintain an adequate and efficient inspection service. Receipts from such fees shall be covered into the Treasury and shall be available to the Secretary of Agriculture for expenditures incurred in carrying out the purposes of this section, including expenditures for salaries of additional inspectors when necessary to supplement the number of inspectors for whose salaries Congress has appropriated. The Secretary is hereby authorized to promulgate regulations governing the sanitary and other conditions under which the Service herein provided shall be granted and maintained, and for otherwise carrying out the purposes of this section. Any person who forges, counterfeits, simulates, or falsely represents, or without proper authority uses any mark, stamp, tag, label, or other identification devices authorized or required by the provisions of this section or regulations thereunder, shall be guilty of a misdemeanor, and shall on conviction thereof be subject to imprisonment for not more than one year or a fine of not less than \$1,000 nor more than \$5,000 or both such imprisonment and fine."

The Food and Drug Administration states that "Although the provisions of this amendment to the law undoubtedly are sufficiently broad to apply to all seafood, the legislation undoubtedly was the result of the experience of the shrimp-packing industry which reached the conclusion that in handling a highly perishable sea food the most effective method of insuring a satisfactory product suitable for human consumption is the application of a thorough-going governmental inspection and supervision at the source of production."

Three shrimp canneries in Biloxi, Miss., were the first to request the inspection service, receiving it in September 1934. In all, 22 plants in Georgia, Alabama, Mississippi, Louisiana, and Texas were supervised during the 1934-35 season, their combined packs representing 300,000 standard cases of the season's total of approximately 1,101,000 cases. The following year 39 plants were under inspection, packing 90 percent of the shrimp canned during the season starting July 1, 1935, and ending June 30, 1936. This percentage has been maintained or increased during each succeeding year. As may be noted in Table 1, the cost of the service has ranged from less than 1/5 to about 1/4 cent per can, or from 8.2 to 12.4 cents per case.

Table 1. The Cost of Supervising the Production of Canned Shrimp under the Seafood Inspection Service of the U. S. Food and Drug Administration 1934-35 to 1939-40

Season	Inspected and supervised		Cost of inspection		
	Plants	Pack	Total	Per standard case	Per can
July 1-June 30					
1934 - 1935	22	300,054	37,263.50	12.4	0.26
1935 - 1936	39	967,380	95,534.34	9.9	0.205
1936 - 1937	50	887,567	1/ 98,599.46	11.1	0.23
1937 - 1938	51	1,181,423	1/110,595.50	9.4	0.195
1938 - 1939	41	1,085,829	1/ 89,117.43	8.2	0.17
1939 - 1940 2/	40	1,106,111	(3)	(3)	(3)

1/ Includes \$40,000 appropriated by Congress to aid in defraying inspection costs.

2/ Preliminary figures to June 15. Seven plants did not request inspection, only two of which operated extensively.

3/ Data not available.

It has been stated by the Food and Drug Administration that "While the sea-food amendment does not render inoperative the provisions of the law for criminal prosecution and seizure action on interstate shipments of violative goods, a compliance with the regulations promulgated under the amendment insures the integrity of the products and thus renders the remedial provisions of the act unnecessary. Not only is this advantageous to the packer but the consumer is more effectively guaranteed a sanitary, safe, and wholesome product than can possibly be assured through the enforcement of the other provisions of the act." The stringent regulations of the Seafood Inspection Service, as the administrating unit is known, made necessary numerous and widespread alterations in both the type of equipment and the method of procedure in most of the plants requesting supervision of their production. Plants had to be screened against insects and protected from vermin. Equipment for washing shrimp and inspection belts for culling shrimp were required. Wood tables, tanks, and similar equipment unable to meet sanitary requirements had to be replaced by metal. Delays in packing were forbidden and retorts had to be equipped with regulating and recording devices to insure adequate processing.

The revised regulations for the inspection of canned shrimp during the 1939-40 season as promulgated by the Secretary of Agriculture may be found in the Federal Register for June 14, 1939, Volume 4, Number 114. They took effect the following July 1. At this time it is understood there will be no change in the regulations for the 1940-41 season.

A resume of the more important portions of the regulations may be of interest to the fishing industry, both to reveal the operation of the Seafood Amendment as applied to the shrimp packing plants and to indicate the scope of its probable application to other fish processing plants interested in requesting inspection.

The first sections of the regulations provide for making application for the inspection service and setting the length of the initial inspection period. The Secretary may refuse an application for cause. The initial inspection service period, formerly 6 months, was increased to 9 months in order to aid in securing and retaining an efficient inspection personnel. Provision is made for the extension of inspection periods as well as for withdrawals during closed seasons. Two or more packers may request inspection in one plant. One or more inspectors are assigned to each plant and have free access to all parts of the establishment and boats delivering to it.

A plant under inspection may not handle or store uninspected shrimp, and all shrimp delivered to it is subject to inspection.

The general requirements for plant and equipment demand screened openings and tight walls and roofs. Picking and packing rooms must be separate, adequately lighted and ventilated, and have fixtures and equipment designed and arranged to permit thorough cleaning.

Surfaces of tanks, belts, tables, flumes, containers, and other equipment with which either picked or unpicked shrimp come in contact must be of metal. Adequate steam and water must be available for washing and cleaning. Sanitary toilet facilities must be provided. Sanitary wash basins with liquid or powdered soap must be installed in the picking and packing rooms with paper towels in the latter. Signs requiring employees to wash their hands after each absence from duty must be posted.

The inspector must be provided with space for preparing records and examining samples. Washing devices and inspection belts must be provided for use at the head of the picking tables. Picked shrimp must be removed from the picking tables in flumes of clean water. Cans and containers must be code marked. Each cannery line must carry a counting device. Each retort must be fitted with an automatic temperature regulating control, an indicating mercury thermometer and a recording thermometer, a pressure gauge, and, for steam cook, a 3/4-inch blow-off vent, a 1/8-inch bleeder, and a baffle plate in the base of the retort unless perforated base retort baskets are used.

General operating conditions require that boats catching or carrying shrimp must be maintained in a sanitary condition. If necessary, shrimp must be iced and kept cool. Boats may accept only fresh shrimp and must be washed down at the cannery after each delivery. Shrimp must be washed and culled before picking. Offal from picking tables must be disposed of at frequent intervals. Shrimp must be picked into the flume and not into cups. There must be no delay in the handling of the shrimp in the cannery. Condemned shrimp must not be used for food purposes. Floors, fixtures, and equipment must be maintained in a sanitary condition. Employees handling shrimp must wash hands after each absence from post of duty. Persons with infectious or contagious diseases may not be employed. Offal, debris, or refuse may not be permitted to accumulate.

Code marking regulations require that cans or other containers be coded to show the date of packing, the plant where packed, and the size of shrimp, if graded. Code lots must be stored separately.

Processing regulations require that the closure of the can and the time and temperature of processing must be sufficient to prevent bacterial spoilage. The pack must be processed in accordance with the time and temperature shown on a chart in the regulations. The inspector must examine samples of canned shrimp after processing and supervise the destruction for food purposes of that which is not properly processed or is unfit for food.

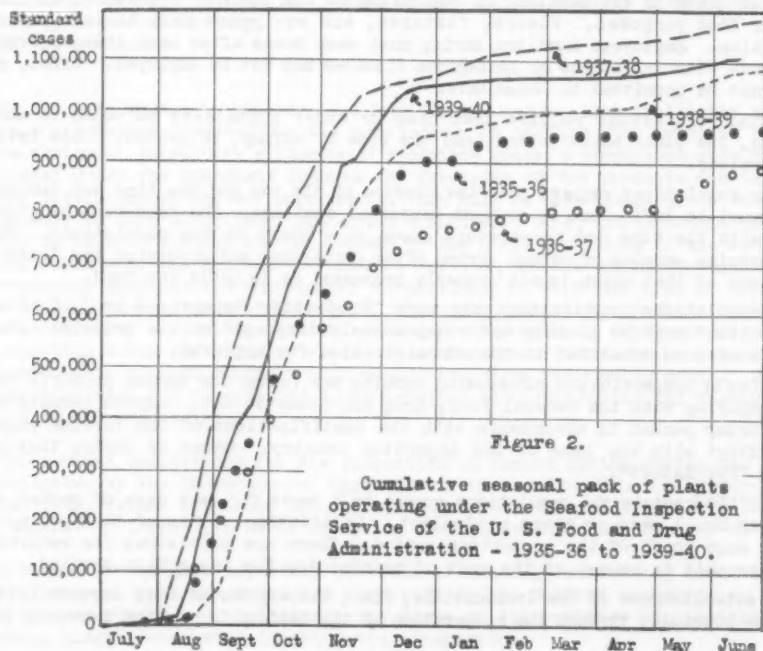
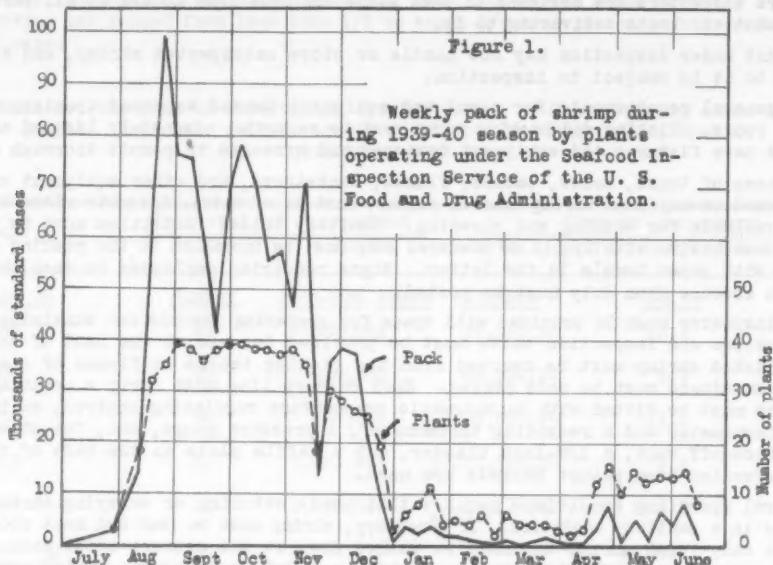
Labeling regulations provide that the mark "Production Supervised by U. S. Food and Drug Administration" must be plainly and conspicuously displayed on the principal panel or panels. Labels must be submitted to the Administration for approval.

Certificates of inspection and warehousing permits are issued for shrimp properly packed, labeled, and complying with the Federal Food, Drug and Cosmetic Act. Export permits may be obtained for shrimp packed in accordance with the specifications of the foreign purchaser and not in conflict with the laws of the importing country. Cases of shrimp thus packed must be marked "For Export".

Inspection fees set by the regulations amount to 3 cents for each case of packed shrimp consisting of 48 No. 1 cans or their equivalent. In addition, a fee of \$120 per month is prescribed for each month of the inspection period. There are provisions for returning to the packers fees paid in excess of the cost of maintaining the inspection service.

With the establishment of the Jacksonville, Fla., Fishery Market News Service office in 1939, it became possible, through the cooperation of the Seafood Inspection Service, to com-

pile from the inspector's reports detailed data on the size and composition of the shrimp pack. This information is released at weekly intervals in the Jacksonville and New Orleans Fishery Market News reports. The graphs in Figures 1 and 2 and the data in Table 1 were prepared from periodic reports of the Seafood Inspection Service for the earlier years and from Jacksonville Market News reports for the later seasons.



For a number of years shrimp packers have used a unique method to ascertain the approximate current pack of shrimp. Because of the proximity of can making factories to the packing plants and the habit of purchasing cans only as needed, it was found possible to compute the weekly sales of the can manufacturers and arrive at an approximate total for the week's pack. A comparison between these figures and actual totals revealed an error of about 15 percent when packing was above 40,000 cases monthly and considerably more when it fell below that amount.

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#### STUDY OF ALASKA KING CRAB UNDERTAKEN

An appropriation of \$100,000 was recently made available by Congress for the use of the Fish and Wildlife Service in investigating the king crab resource of Alaska. Arrangements preliminary to the making of the investigation have been made and the Service will soon have an expedition in Alaskan waters carrying out the details of the program. The investigation will include experiments in crab canning as well as studies of the resource to determine its extent and the possibilities of exploitation. Operations will be conducted from a chartered vessel. Field studies will be carried on until the winter and will be resumed again early in 1941. Personnel which is being assigned to the investigation includes a technologist, two biologists, an economist, and a fisheries engineer.

#### SOME NEWS OF FISHERMEN'S COOPERATIVES

The activities of two fishery cooperatives in the Great Lakes area have recently been reported by the Service's fisheries statistical agent in that territory. These cooperatives are the North Superior Fisheries at Tofte, Minnesota, organized in 1932, and Lake Superior Fisheries at Hancock, Michigan, which started operations in 1936. Both cooperatives were organized primarily to handle lake herring.

Although situated in different areas, both organizations have developed a subsidiary type of business not contemplated originally. As they entered the business of trucking their fresh fish to large cities at a considerable distance south of them, they found it profitable to make return hauls. In this way both organizations have developed an enterprise whereby they supply food stores in their localities with fresh fruits and vegetables brought back from the cities in which they dispose of their fish.

The Indian cooperative at Redby, Minnesota, is actively engaged in marketing the fish caught in Red Lake by its members. This organization, Red Lake Fisheries Association, began to handle the catch in 1929. According to our last reports, the principal species marketed were pike, perch, and whitefish.

The Fishermen's Cooperative Association of Vinalhaven, Maine, reports a membership of about 40 and an increasing business in fishermen's supplies. During 1939 the members sold a considerable volume of live lobsters through joint sale.

The Beals Cooperative Society, organized among the fishermen of Beals Island, Maine, has been operating a general store since June 1937.

Fishermen of Martha's Vineyard, Massachusetts, are investigating the desirability of forming a cooperative organization.

Sixty fishermen of Sitka, Hoonah, Haines, and Juneau, Alaska, have filed articles of incorporation for the Alaska Fishermen's Cooperative Association, according to a report from Prince Rupert, B. C.

#### UNITED STATES GRADES IMMENSE QUANTITIES OF MEAT

An article entitled "Federal Meat Grading and the Retail Meat Dealer", by W. O. Fraser, Principal Marketing Specialist, United States Department of Agriculture, appeared in Meat Merchandising for May. This article discloses that the Federal meat grading and stamping

service is becoming of increasing importance annually in meat merchandising. In 1930 about eighty million pounds of meat was graded. In 1939 the quantity had jumped almost 800 percent to 635,000,000 pounds.

The Federal grade stamp is described by Mr. Fraser as the best assurance a retailer can give the consumer that the meat he sells does not vary materially in quality from day to day or from week to week.

#### WHOLESALE AND RETAIL PRICES

Wholesale prices of all commodities and foods, as reflected through the weekly indexes of the Bureau of Labor Statistics, changed only slightly over the period from June 29 to July 27. The index of all commodities rose from 77.1 percent of the 1926 average to 77.3 percent while the foods products index dropped from 69.7 percent to 69.6 percent. Compared with the July 29, 1939, figures, the 1940 percentages of July 27 increased 3.3 percent for all commodities and 4.3 percent for foods.

Retail costs of food increased 1.3 percent between May 14 and June 18, according to the Bureau of Labor Statistics. Food costs increased in 36 of the 51 cities covered, decreased in 14, and in one there was no change. Rises in price were recorded for 15 of the 54 foods included, no change was recorded for 19, and 20 experienced lower prices.

On June 18 the retail index for all foods was 98.3 percent of the 5-year average from 1935 to 1939. This compares with the May 14 average of 97.0 percent and the figure of 93.6 percent of June 13, 1939. Pink salmon averaged 15.7 cents per 16-ounce can on June 18, a gain of .6 percent since May 14, and 24.6 percent above the June 13, 1939, price. The price of red salmon was 25.7 cents, .4 percent higher than the May 14 price and 11.7 percent over that of June 13, 1939.

#### NEW ENGLAND VESSEL LANDINGS IN JUNE

The landings of fishing vessels of five net tons and over at Boston and Gloucester, Mass., and Portland, Maine, during June totaled 30,642,000 pounds, an increase of 37 percent over the landings of the previous month. Information on these activities has been published by the Fish and Wildlife Service in Fisheries Statistical Bulletin No. 1393. These products were valued at \$737,000 to the fishermen, an increase of 10 percent above the value of the May landings. Compared with activities in June 1939, the landings of the current June represent a decrease of 6 percent in volume and an increase of 6 percent in value. Boston remained of first importance as a landing point with 55 percent of the products received at that port. Gloucester followed with 39 percent and Portland, 6 percent. Rosefish, providing 9,900,000 pounds, led among the items contributing to the volume; haddock was second with 8,999,000 pounds; and cod, 2,970,000 pounds; mackerel, 2,839,000 pounds; flounders, 1,378,000 pounds; and pollock, 1,062,000 pounds, followed. Mackerel receipts represented an increase of 140 percent over June 1939 and those of pollock, an increase of 85 percent, while rosefish, haddock, cod, and flounder landings decreased 4 percent, 3 percent, 58 percent, and 7 percent, respectively, compared with the totals of the corresponding month in 1939.

During the first 6 months of 1940 there have been 145,607,000 pounds of fishery products landed at the three ports compared with 186,460,000 pounds received during the corresponding period in 1939, a decrease of 22 percent. The value of the landings in 1940 amounted to \$4,725,000, a gain of 4 percent over that of the corresponding 1939 period, however. During the months from January through June 57,774,000 pounds of haddock were landed, and rosefish totaling 34,168,000 pounds; cod, 24,418,000 pounds; flounders, 10,171,000 pounds; pollock, 7,409,000 pounds; and mackerel, 3,297,000 pounds followed in importance among other items. The mackerel total represents an increase of 15 percent over the production of the first six months of 1939, while the other items represent decreases of 18 percent, 6 percent, 46 percent, 4 percent, and 23 percent, respectively.

## FISH PIER LANDINGS OF FISH AT BOSTON INCREASE

There were 16,794,000 pounds of fish sold at the Boston Fish Pier during June 1940, according to statistics compiled by the Fishery Market News Service. These fish averaged 3.09 cents per pound in price, yielding a total of \$519,000 to the fishermen. The month's totals show an increase of 16 percent in volume over those of the previous month and a 1 percent rise in value. Compared with the corresponding month of 1939, the sales represent a drop of 20 percent in volume and 7 percent in value.

The June 1940 receipts at the Pier included 657 fares compared with 485 in May and 646 in June 1939. Landings from offshore waters totaled 13,041,000 pounds and those from inshore areas, 3,753,000 pounds, 78 percent and 22 percent, respectively, of the total receipts. More than half of the offshore total, 7,531,000 pounds, was composed of haddock, while mackerel, supplying 2,529,000 pounds, was second in importance. Among species contributing to the inshore total were whiting, 1,820,000 pounds; flounders, 626,000 pounds; haddock, 496,000 pounds; and cod, 339,000 pounds.

During the first six months of 1940 there have been 105,744,000 pounds of fish sold at the Boston Fish Pier. The average price received was 3.72 cents per pound. In 1939, 138,351,000 pounds were taken for a corresponding 6-months period, with an average price of 2.69 cents per pound resulting. Because of the higher unit price received this year, a 6 percent increase in total sales has resulted in 1940 although the volume decreased 24 percent. There were 2,973 fares included in the 1940 landings for this period compared with 2,947 fares figuring in the 1939 totals.

## FISHERIES OF MASSACHUSETTS

Tuna.--A report from the Service's statistical agent in Massachusetts states that Gloucester landings of tuna by seiners have amounted to about 175,000 pounds for this year through July. Many tuna have also been taken by harpoon and hook and line. These fish are canned in Gloucester.

## FISHERIES OF NEW JERSEY

The Service's statistical agent for New Jersey has furnished the following items covering current conditions in the commercial fisheries of that State.

Shad.--Reports from wholesale dealers and fishermen in the Great Bay area of Atlantic County indicate that shad have been more abundant in Great Bay waters during the past season than in 1939. The increase in catch was accompanied by a rise in market prices.

Striped bass.--The catch of striped bass during the past season and to the present time has been considered unsatisfactory owing to the absence of fish of sufficient size to be utilized commercially.

Offshore fishes.--The offshore drift gill net fisheries in Monmouth County have been comparatively inactive with butterfish, mackerel, and bonitos reportedly abundant. Market values are sufficiently low to discourage normal operations. Bluefish have been scarce.

Lobsters.--A decrease in abundance of lobsters in the major producing areas off Monmouth County is reported.

Clams.--With hard clams apparently plentiful, a limited market demand has kept clam production at a minimum. Present activities are estimated to be about 50 percent below those of a year ago.

Oysters.--Market demands and production of oysters from private grounds in Northern Atlantic County are remaining satisfactory. An increase in these activities and a rise in prices are reported. An increase comparable to the production of market oysters is noted in the planting of seed oysters.

## FISHERIES OF THE SOUTH ATLANTIC AREA

The Service's statistical agent in the South Atlantic States reports that for the first time in approximately four months the shrimp fleet has been actively fishing for shrimp. Several of the vessels obtained a few bushels each about the first of July and since that time the entire fleet has become active. Prices have averaged about 8 cents for heads off shrimp, which is approximately twice the price generally paid for these products at this season of the year.

## FISHERY INDUSTRIES OF THE GREAT LAKES

A revision has been made of Memorandum I-63, "Fishing Industry of the Great Lakes", by John Van Oosten. This 13-page pamphlet gives detailed figures on the volume and value of the Great Lakes fisheries and describes the methods utilized in fishing operations. Copies of this publication can be secured free of charge by addressing the Fish and Wildlife Service, Washington, D. C.

## CHICAGO'S RECEIPTS MAINTAIN LEAD OVER 1939

Receipts at the Chicago Wholesale Fish Market during June, as recorded by the Fishery Market News Service office in that city, totaled 4,681,000 pounds of fish and fishery products. Seventy-five items contributed to this total, 27 from fresh-water sources, 33 from salt water, and 15 representing shellfish and miscellaneous items. The receipts for June decreased 9 percent from the May 1940 total of 5,148,000 pounds but were 29 percent greater than the June 1939 figure of 3,632,000 pounds. Fresh-water items supplied 2,340,000 pounds or 50 percent of the total; salt-water classifications recorded 1,297,000 pounds or 28 percent; and shellfish, etc., supplied 1,044,000 pounds or 22 percent.

Most important among the items received in Chicago during June were shrimp, 857,000 pounds; halibut, 559,000 pounds; lake trout, 510,000 pounds; lake herring, 344,000 pounds; whitefish, 292,000 pounds; and rosefish fillets, 247,000 pounds. The major differences between the activity in these items between June and the previous month occurred in the cases of halibut, lake trout, and lake herring. Halibut declined 24 percent and lake trout, 23 percent, while lake herring increased 25 percent compared with the earlier figure. Whitefish receipts increased 11 percent and those of rosefish fillets, 7 percent. Compared with the June 1939 figures, all major items reflected an increase, shrimp stocks increasing 10 percent; halibut, 27 percent; lake trout, 15 percent; lake herring, 52 percent; whitefish, 7 percent; and rosefish fillets, 53 percent.

Eighty percent of the June receipts was provided by items received from domestic sources. Michigan with 23 percent led the domestic areas contributing to the receipts, and Louisiana with 18 percent, Wisconsin with 16 percent, and Massachusetts with 13 percent followed. Michigan furnished 292,000 pounds of lake trout and 140,000 pounds of whitefish. Louisiana's contributions included 653,000 pounds of shrimp. Lake trout, 164,000 pounds, and lake herring, 148,000 pounds, were included in the Wisconsin total; and 260,000 pounds of rosefish fillets were included in the shipments from Massachusetts. Of primary importance in sources of imported items was British Columbia, which supplied 618,000 pounds of fish including 538,000 pounds of halibut. Of the latter item there were 436,000 pounds shipped in bond by United States fishermen. Nova Scotia, furnishing 94,000 pounds, was second in importance as a point of origin of imported items.

The June receipts included 2,055,000 pounds of products shipped by express, 1,371,000 pounds by truck, and 1,255,000 pounds by railway freight, these three classifications contributing 44 percent, 29 percent, and 27 percent, respectively, of the total.

During the first six months of 1940, 28,970,000 pounds of fish and fishery products were received, compared with 22,283,000 pounds received during the first six months of 1939. These figures show a 30 percent increase for 1940 above the 1939 total. Most important of the items contributing during the period was halibut with 3,632,000 pounds, a 30 percent

increase over the total for the 6-months period in 1939. Shrimp was second in importance with 3,286,000 pounds, an increase of 31 percent; lake trout followed with 2,601,000 pounds, an increase of 36 percent; sauger was fourth with 2,401,000 pounds, 14 percent below the 1939 figure; and rosefish fillets was fifth with 1,737,000 pounds, a 105 percent increase.

#### PACIFIC HALIBUT FLEET CONTRIBUTES HALF MILLION DOLLARS IN FISH LIVERS

Statistics collected by the International Fisheries Commission show that during 1939 there were 1,442,000 pounds of fish livers and other oil producing fish trimmings, valued at \$567,000, landed by vessels of the Pacific Coast halibut fleet. Of these amounts, 1,027,000 pounds, valued at \$422,000, were credited to vessels of American registry and 415,000 pounds, valued at \$145,000, were procured by Canadian vessels. Ports of landing included Seattle, Wash., 595,000 pounds; Prince Rupert, B. C., 608,000 pounds; Vancouver, B. C., 84,000 pounds; and miscellaneous Alaska ports, 155,000 pounds. Of the American fleet landings, 592,000 pounds were delivered at Seattle, 280,000 pounds at Prince Rupert, and 155,000 pounds at Alaskan ports. Canadian vessels delivered the major portion of their items, 328,000 pounds, at Prince Rupert, with 84,000 pounds delivered to Vancouver, B. C., and 3,000 pounds landed at Seattle. Halibut livers, 886,000 pounds, valued at \$443,000, was first in importance among the items landed. Halibut and sablefish trimmings, 286,000 pounds, valued at \$29,000; sablefish livers, 194,000 pounds, valued at \$68,000; "ling cod" and rockfish livers, 62,000 pounds, valued at \$24,000; and soupfin shark livers, 14,000 pounds, valued at \$3,000 followed in importance.

#### FISHERIES OF BRITISH COLUMBIA, 1939

A catch of fish and shellfish amounting to 417,222,000 pounds and valued at \$7,891,000 was obtained in the British Columbia commercial fisheries during 1939, according to a report prepared by the Dominion Bureau of Statistics. As prepared for consumption, the fishery products of this area had a total value of \$17,699,000. This compares with a total during the preceding year of \$18,673,000 and \$16,155,000 in 1937. Of the prepared products, those obtained from salmon had a value of \$12,995,000, 73 percent of the 1939 total. Herring and halibut were second and third in importance. Whaling operations, previously carried on from two stations on the Queen Charlotte Islands, were suspended for the season of 1939.

Investment in the Province's fisheries in 1939 was recorded at \$22,478,000 compared with \$24,065,000 in the preceding year. Of this amount, \$8,154,000 was reported as the value of vessels, boats, and gear, and \$14,323,000 the investment in fish canning and curing establishments, of which there were 67 in operation in 1939. There were 9,609 employees engaged during the year in catching fish and 6,271 working in fish canning and curing establishments.

#### FISHERIES OF NOVA SCOTIA IN 1939

The fishermen of Nova Scotia captured during 1939, 282,127,000 pounds of fish and shellfish, valued at \$5,308,000. Details of this production have been supplied by the Dominion Bureau of Statistics of Ottawa, Canada. Products valued at \$8,754,000 were prepared from the catch. Leading items were cod, lobster, and haddock. There were 17,544 fishermen engaged in the fisheries and 3,272 persons utilized in fish canning and curing establishments. Capital invested was \$9,929,000, including \$6,202,000 in vessels, boats, and gear, and \$3,727,000 in fish canning and curing establishments.

#### FISHERIES OF PRINCE EDWARD ISLAND

The Dominion Bureau of Statistics, Ottawa, Canada, reports that in 1939 there were 30,566,000 pounds of fish and shellfish, valued at \$683,000, landed by Prince Edward Island fishermen. Fishery products valued at \$950,000 were prepared from the catch. Of this amount, \$590,000 represented products of the lobster fishery, and cod, herring, smelts, and mackerel

followed in order, though of considerably less importance. Employed in the fisheries of the Province were 3,454 fishermen and 1,332 persons in fish canning and curing establishments, and a capital investment of \$1,168,000 was reported.

#### NOTES ON CANADIAN COOPERATIVES

The Miramichi fishermen's cooperative at Loggieville, New Brunswick, has 119 members and a potential membership of about 300, according to The Maritime Cooperator, Truro, N. S., July 1, 1940. In the 1939 season they shipped 107 tons of smelts which averaged 6.8 cents per pound. Twenty-two members started a new venture on May 15, 1940, shipping shad and salmon. The cooperative has a plant valued at \$2,500, which was built this year, and a surplus of \$1,400 in the bank.

At Blackville, New Brunswick, a cooperative saw mill is under way, according to the same publication. The mill is now being built and will start soon to supply its members with lumber for building materials and for the making of barrels.

The Lockeport fishermen's cooperative in Nova Scotia is shipping about one carload of fish a week to the Montreal market, according to the same source. In addition, the cooperative is doing some canning, while the remainder of the catch is salted for the Yarmouth trade. At last reports they were paying \$2.50 for haddock and \$1.50 for market cod.

In Pabay the cooperators have a vessel of their own which is bringing in from 20 to 25 thousand pounds of fish per week, says The Maritime Cooperator. The prices are about the same as those paid by the Lockeport cooperative.

Stations of the Kyuquot Trollers Cooperative Association of British Columbia handled 290,000 pounds of salmon during the week of July 11, according to the Commercial Fishermen's Weekly of Vancouver. The salmon were picked up at these stations by cannery vessels. This cooperative, together with the Prince Rupert Fishermen's Cooperative Association, handles some five million pounds of fish annually. The two organizations sell commodities and supplies through the stores they operate, to a value of nearly \$200,000 annually.

Continued educational work on cooperation among fishermen was asked of the Department of Fisheries at the semi-annual meeting of the Kyuquot cooperative, April 30, 1939. The directors were authorized to erect a store building at Bamfield, B. C.

North Island Trollers Cooperative Association handled a million and one-half pounds of salmon in the 1939 season while the Prince Rupert Fishermen's Cooperative Association also handled over a million pounds. These two British Columbia fishermen's cooperatives now merged under the name of the latter operate 7 stores, 7 camps, and 4 fish carriers. The store at Cow Bay operates throughout the year. In 1938 the Kyuquot cooperative distributed savings returns of 4 percent on fish purchases and store sales, and 2 percent on boat operations. The total of these savings was \$10,487.96.

#### PRINCE EDWARD ISLAND COOPERATIVE CANS MACKEREL

An article in The Maritime Cooperator describes the operations of the Consumer Cooperative Cannery Association Ltd., operating under government charter at Mount Stewart, Prince Edward Island. This association utilizes for its center of operations a building 60 by 30 feet which contains two stores and a basement. Cannery equipment utilized includes a boiler, electric water pump, reserve tank, blanchers, exhausters, sealing machines, and other items. During the past summer this firm started operations canning mackerel, fruits, vegetables, and chicken. Materials for the building were supplied by the members who also installed the electric wiring and pipe fitting.

#### ICELANDERS EAT FISH ON MONDAY

A Commercial Attaché of the Bureau of Foreign and Domestic Commerce has reported that fish is classed as the main dish in Reykjavik, the capital of Iceland, and that it is eaten mostly on Monday. The population of this city--almost 40,000--on each Monday consumes amounts of fresh fish totaling five to seven tons.

## JAPAN CENTRALIZES CONTROL OF FISHERY INDUSTRIES

According to Foodstuffs Round the World, the establishment of the Nippon Suisan Kanzume Seizo Gyo Suisan Kumiai (Japan Marine Products Manufacturing Association) on April 1, 1940, marked a further step in the official program for centralizing control over the local fisheries industries. The new association reportedly will have its head offices in Tokyo, with its control extending throughout Japan. Manufacturers of canned crab, salmon, and sea trout are the only parties not included in the organization.

In addition to this new organization, there are the following canned marine products manufacturing groups still in existence: Nippon Sake Masu Kanzume Gyo Suisan Kumisi--salmon and sea trout; Rikuso Kani Kanzume Gyo Suisan Kumisi--canned crab companies operating from the mainland; Bokanshiki Kani Kanzume Gyo Suisan Kumisi--floating crab canneries; and Nippon Kegani Hanasaki Kani Kanzume Gyo Suisan Kumiai--guild for Kegani and Hanasaki crabs.

The dissolution of the Japan Canned Crab Export Association on May 14 has placed the entire canned marine products export industry of Japan in control of the Japan Canned Marine Products Export Association.

## QUARTERLY MARINE-ANIMAL OIL TRADE

A decrease in the production of domestic fish oil during the second quarter of the current year as compared with the production for the same period last year is disclosed in information collected by the Fish and Wildlife Service and included in a public release by the Bureau of the Census. The decrease is due to a drop in the production of herring and sardine oils.

## Production, Consumption, and Stocks of Marine-animal Oils

Oil	Factory operation for the quarter ending June 30		Factory and warehouse stocks, June 30
	Production	Consumption	
1940			
Cod and cod-liver oils	179,026	3,663,253	21,247,271
Other fish oils	1/ 5,629,031	36,483,271	86,298,756
Whale oils	35,310	7,255,892	58,961,134
Total	5,843,367	47,402,416	166,507,161
1939			
Cod and cod-liver oils	325,521	5,205,713	23,404,073
Other fish oils	2/ 8,155,358	43,542,896	83,773,537
Whale oils	502,575	17,389,741	73,186,705
Total	8,983,454	66,138,350	180,364,315

1/ Includes herring and sardine oils, 152,910 pounds; and menhaden oil, 4,357,922 pounds.

2/ Includes herring and sardine oils, 2,836,200 pounds; menhaden oil, 4,482,000 pounds; and other fish oils, 837,158 pounds.

## FROZEN FISH TRADE

## United States Cold-storage Holdings Continue to Increase

Cold-storage stocks of fishery products in the United States on July 15 totaled 56,420,000 pounds, a 37 percent gain over the holdings of June 15, according to Fisheries Statistical Bulletin 1394, compiled from figures collected by the Agricultural Marketing Service of the Department of Agriculture. The July 15 holdings were also a gain of 4 percent above those of July 15 a year ago and 5 percent larger than the 5-year average for July 15.

Leading items included halibut, 11,884,000 pounds; mackerel, 6,783,000 pounds; whiting, 6,600,000 pounds; haddock fillets, 3,693,000 pounds; salmon, 2,891,000 pounds; shrimp, 2,765,000 pounds; rosefish fillets, 1,997,000 pounds; sea herring, 1,874,000 pounds; and smelts, eulachon, etc., 1,753,000 pounds.

During the month ending July 15 there were 24,963,000 pounds of fishery products frozen by United States plants, greater by 8 percent than the freezing of the previous month, 10 percent over the corresponding 1939 period, and 16 percent above the 5-year average for the month. There were 4,810,000 pounds of whiting frozen, and other items of importance included mackerel, 4,663,000 pounds; halibut, 4,401,000 pounds; haddock fillets, 2,268,000 pounds; rosefish fillets, 1,561,000 pounds; and salmon, 1,199,000 pounds. Among shellfish items, there were 670,000 pounds of shrimp, 514,000 pounds of squid, and 444,000 pounds of scallops frozen during the month.

Cold-storage stocks of cured herring on July 15 were 24,678,000 pounds, compared with an 18,677,000-pound total for July 15, 1939, and a 5-year average for July 15 of 15,802,000 pounds. Of Mild-cured salmon there were 5,615,000 pounds on hand on July 15 compared with 5,210,000 pounds on July 15, 1939, and a 5-year average of 4,364,000 pounds on July 15.

#### Boston Fish Stocks in Cold-storage Make Abrupt Rise

With increased landings of fish at the Boston Fish Pier providing additional supplies of fish, the cold-storage holdings of frozen fishery products in Boston cold-storage plants showed an increase during July, according to statistics collected and compiled by the Boston office of the Fishery Market News Service. Total stocks on hand on July 31 aggregated 12,378,000 pounds, a 95 percent rise above the June 26 total and 16 percent above the holdings on July 26, 1939. Included were 11,402,000 pounds of salt-water items, 106 percent more than the total of five weeks previous and 25 percent in advance of the holdings of 12 months before. Holdings of fresh-water items were negligible while 960,000 pounds of shellfish were held.

Among the salt-water items, groundfish fillet stocks remained first in importance, totaling 5,195,000 pounds, a 143 percent increase over the June 26 total although 15 percent lower than the stocks on hand July 26, 1939. Mackerel with 3,170,000 pounds held displayed an increase of 142 percent above the June 26, 1940, total and 413 percent over the corresponding date in July 1939. Whiting and smelt stocks of 1,623,000 pounds and 520,000 pounds, respectively, followed in importance. First in importance in shellfish items was scallops with 417,000 pounds on hand, an increase of 8 percent over the total of five weeks previous and 32 percent above the July 26, 1939, total. The stock of squid, totaling 372,000 pounds, was 7 percent above the June 26 figure but 69 percent below the total of July 26, 1939.

Among the groundfish fillets totaling 5,195,000 pounds on hand July 31 were haddock, 3,377,000 pounds, an increase of 202 percent over the total of five weeks earlier; and cod, 911,000 pounds, 352 percent above the June 26 total.

#### Cold-storage Stocks in New York Increase

The stocks of frozen fishery products in storage in cold-storage plants in New York City on July 25 were 12 percent larger than those of four weeks previous. Figures covering these holdings are supplied by the New York office of the Fishery Market News Service. On June 25 there were 5,732,000 pounds of these products in storage compared with 5,101,000 pounds on hand June 27, and 6,636,000 pounds held on July 27, 1939. Salt-water items totaling 3,090,000 pounds contributed 54 percent of the total; fresh-water items, 1,595,000 pounds, 28 percent; and shellfish, etc., 1,047,000 pounds, 18 percent. Mackerel with 813,000 pounds; shad, 294,000 pounds; king salmon, 267,000 pounds; and butterfish, 260,000 pounds were the four leading items among those from salt-water sources. The stock of mackerel increased 27 percent from that of June 27 and 271 percent from the July 27, 1939, total and king salmon supplies also displayed increases, growing from 174,000 pounds on hand on June 27, 1940, and 158,000 pounds held on July 27, 1939. Among fresh-water items, whitefish, 596,000 pounds, and sturgeon, 565,000 pounds, predominated in importance, with stocks of whitefish representing an increase of 42 percent over the June 27, 1940, total.

Shellfish items included shrimp, 302,000 pounds; squid, 242,000 pounds; scallops, 233,000 pounds; spiny lobsters, 126,000 pounds; and other less important items. The major change in these stocks as compared with those of June 27, 1940, and of the corresponding date in 1939 occurred in the case of squid which increased 344 percent in the 4-week period but decreased 61 percent from the total of a year earlier on that date. Spiny lobster stocks decreased 51 percent from the June 27 total and 52 percent below the July 27, 1939, figure. The stock of scallops, when compared with the June 27, 1940, figure, showed an increase of 71 percent.

#### Chicago Cold-storage Holdings Remain Constant

The Chicago office of the Fishery Market News Service reports that on July 25 Chicago cold-storage plants held 3,451,000 pounds of frozen fishery products. This was a decrease of 1 percent from the total of four weeks previous and 29 percent below the July 27, 1939, figure. Stocks of fresh-water items contributed 1,533,000 pounds; salt-water items, 901,000 pounds; shellfish, 571,000 pounds; and unclassified items, 446,000 pounds.

First in importance among fresh-water items was whitefish, 355,000 pounds, 9 percent above the June 27, 1940, figure, although 6 percent less than the July 27, 1939, total. Blue pike and sauger was second with 316,000 pounds, 37 percent less than the total of June 27 and 72 percent below the total of a year previous. Smelt, 286,000 pounds, displayed an increase of 14 percent during the 4-week period but a decrease of 23 percent for the year. Shrimp stocks totaling 372,000 pounds comprised more than half of the shellfish supply on hand but showed a drop of 5 percent in four weeks and 37 percent for the year.

#### Halibut and Sea Herring Lead Canadian Cold-storage Items

Stocks of frozen fresh fishery products in Canadian cold-storage plants on August 1 were 8½ million pounds larger than those of July 1, a gain of almost 50 percent, according to a preliminary report of the Dominion Bureau of Statistics. The August 1 total was 27,001,000 pounds compared with 18,495,000 pounds on hand July 1 and 30,603,000 pounds held on August 1 a year ago. Increase of stocks of important salt-water fishes provided the rise above July 1 figures as halibut increased from 4,887,000 pounds to 5,039,000 pounds; sea herring from 2,725,000 pounds to 4,417,000 pounds; cod, whole and fillets, 2,268,000 pounds to 3,848,000 pounds; mackerel, 1,864,000 pounds to 2,726,000 pounds; salmon, 990,000 pounds to 2,309,000 pounds; and haddock, whole and fillets, 571,000 pounds to 914,000 pounds. Whitefish stocks were also enlarged, growing from 1,619,000 pounds to 3,135,000 pounds during the month.

Canadian cold-storage plants held also 2,479,000 pounds of frozen smoked fishery products on August 1. Major items in these holdings were fillets of cod, haddock, etc., 1,338,000 pounds; sea herring kippers, 468,000 pounds; and finnan haddie, 385,000 pounds. Compared with stocks of July 1, 1940, and August 1, 1939, the smoked fish holdings of August 1, 1940, displayed gains of 22 percent and 5 percent, respectively.

Freezing activity during July included 15,470,000 pounds of frozen fresh fishery products and 823,000 pounds of frozen smoked items. The total for fresh items was 84 percent larger than the June 1940 figure and 31 percent more than that of July 1939. Cod fillets, 2,733,000 pounds; sea herring, 2,668,000 pounds; mackerel, 1,970,000 pounds; salmon, 1,928,000 pounds; and whitefish, 1,911,000 pounds led among fresh items handled. Freezing of smoked fishery products increased 100 percent above that of June and 104 percent over the July 1939 total. Sea herring kippers and fillets of cod, haddock, etc., were handled in greatest volume among the smoked products.

#### CANNED FISH TRADE

##### United States Canned Fishery Products and Byproducts Worth 130 Million Dollars in 1939

The fishery industries of the United States and Alaska in 1939 produced canned fishery items valued at \$96,459,000 and byproducts valued at \$33,965,000. Detailed information on these operations has recently been released in Fisheries Statistical Bulletin No. 1391.

Four hundred canning plants produced 19,428,000 standard cases of canned fishery items totaling 716,812,000 pounds in weight. Canning and byproducts plants in 26 States and Alaska contributed to the production.

Four hundred canning plants operating in the United States and Alaska prepared a wide variety of products. Of primary importance among canned products were salmon, 5,992,000 cases, valued at \$41,781,000; tuna and tunalike fishes, 3,643,000 cases, valued at \$20,080,000; sardines, 5,264,000 cases, valued at \$16,465,000; shrimp, 1,215,000 cases, valued at \$5,354,000; clam products, 933,000 cases, valued at \$3,795,000; mackerel, 889,000 cases, valued at \$2,589,000; and oysters, 617,000 cases, valued at \$2,431,000. The salmon pack represented 43 percent of the total value of products canned in the United States and Alaska and was a decrease of 18 percent in volume and 1 percent in value from the corresponding totals for 1938. The value of the pack of tuna and tunalike fishes was 32 percent greater than that of the 1938 production for these fishes. Sardines increased 74 percent in value over the 1938 figures; shrimp increased 10 percent; clam products, 21 percent; oysters, 33 percent; while mackerel dropped 11 percent in value.

Among the byproducts manufactured by the fishery industries, marine-animal oils were first in importance. There were 35,707,000 gallons of these oils obtained in the operations. These were valued at \$14,669,000, an 8 percent increase over the value of the oils produced in 1938 and amounting to 43 percent of the value of the total byproduct yield. Fish scrap, meal, etc., valued at \$8,949,000; marine pearl shell products, valued at \$4,899,000; fresh-water pearl shell products, valued at \$2,492,000; and oysters and marine clam shell products, valued at \$1,539,000, followed in value.

Manufacturing plants in California produced items valued at \$45,331,000, 35 percent of the total value of canned products and byproducts. Alaska was second, contributing products valued at \$36,811,000, 28 percent of the total. Maine with \$8,402,000, Washington with \$6,290,000, and Oregon with \$5,035,000 followed in importance.

#### 1940-41 Shrimp Canning Starts Slowly

Less than 2,000 cases of shrimp were canned in July in the 40 shrimp packing plants in the South Atlantic and Gulf States which are covered by the Seafood Inspection Service of the Food and Drug Administration. The slack season in shrimp fishing usually extends through July.

Prices of canned shrimp in usual wholesale quantities, f.o.b. point of production, on August 1, 1940, were reported by Gulf Coast packers as follows:

	Per dozen No. 1 tall tins	
	Wet pack	Dry pack
Small	\$1.05-1.15	\$1.05-1.15
Medium	1.10-1.20	1.15-1.20
Large	1.15-1.25	1.15-1.25
Extra large or jumbo	1.20-1.30	1.20-1.30

#### Tuna Canning Maintains Fast Pace

The tuna industry in California continued in June a canning pace well in front of that of the 1939 season, according to preliminary reports of the California Division of Fish and Game. The 1940 pack to June 30 was 12 percent larger than that of 1939 to the same date. By the end of June, 1,534,000 standard cases of 48 one-pound cans had been canned, 53 percent in the San Diego district and the remainder in the San Pedro area.

Included in the production were 947,000 cases of yellowfin tuna, 62 percent of the total. Other items in order of volume canned were bluefin tuna; striped tuna; tuna, tonno style; tuna flakes; bonito; yellowtail; and albacore.

No sardines or mackerel were packed in California during June.

## FOREIGN FISHERY TRADE

## Canned Salmon Exports Lead Foreign Fishery Trade

With foreign movements of items in fishery trade experiencing unusual characteristics, the exports of canned salmon increased in June to a leading position among foreign trade fishery items. Figures on foreign trade collected by the Bureau of Foreign and Domestic Commerce list for June a total trade movement in edible fishery products of 27,436,000 pounds, including 7,339,000 pounds of exports and 20,097,000 pounds of imports. Movement during the month was 7 percent less than that of June 1939 and an increase of 12 percent above the activities of the previous month. Exports increased 50 percent over the total of June 1939 and 60 percent above the May 1940 figure, and imports, increasing 1 percent over those of May 1940, decreased 18 percent as compared with the June 1939 figure.

The first six months of 1940 have experienced activity in foreign fishery trade 1 percent below that of the corresponding six months in 1939; 224,535,000 pounds of products have been handled, these including 71,609,000 pounds of export items and 152,926,000 pounds of imports. The exports for the 1940 period so far have exceeded those of the first six months of 1939 by 23 percent while the imports have dropped 9 percent.

Exports of canned salmon in June totaled 4,333,000 pounds, a figure almost 350 percent larger than the June 1939 total, and exceeding the shipments of canned salmon of May 1940 by 318 percent. Shipments of this item were larger than those of any other edible fishery item in foreign trade in June and made up more than 50 percent of the entire exports of these items. The heavy shipments during June brought the exports of canned salmon for the first six months of the year to 21,277,000 pounds, an increase of 7 percent above those of the corresponding period in 1939. June canned sardine exports of 1,970,000 pounds were 20 percent below the May 1940 figure and 17 percent below June 1939 movements. Total shipments of sardines for the first six months of 1940, however, still eclipsed those of the corresponding period of 1939 because of the unusually large movements in the January-March period. Canned sardines shipped for the first six months of this year have totaled 41,800,000 pounds, 73 percent in excess of those from the January-June 1939 period. Canned shrimp continued to be exported in quantities smaller than those of 1939. Only 161,000 pounds of this item was exported, bringing the total for the six months to 1,216,000 pounds, 57 percent below the corresponding 1939 total.

Important among the imports for June were lobsters, not canned, 3,468,000 pounds; fresh and frozen fresh-water fish, 2,576,000 pounds; pickled and salted cod, haddock, hake, etc., 1,803,000 pounds; canned sardines, 857,000 pounds; canned crab meat, 630,000 pounds; pickled and salted herring, 298,000 pounds; canned tuna, 294,000 pounds; and canned lobsters, 147,000 pounds. Of these items only lobsters, not canned, showed an increase over the June 1939 imports. Shipments of this item received were 18 percent greater than those of June of a year earlier. Compared with the June 1939 totals, other import items displayed decreases as follows: Fresh and frozen fresh-water fish, 3 percent; pickled and salted cod, etc., 42 percent; canned sardines, 64 percent; canned crab meat, 20 percent; pickled and salted herring, 41 percent; canned tuna, 55 percent; and canned lobsters, 41 percent.

Total imports for the first six months of 1940 included lobsters, not canned, 11,571,000 pounds, 20 percent more than those of the corresponding 1939 period; fresh and frozen fresh-water fish, 27,298,000 pounds, a gain of 4 percent; pickled and salted cod, etc., 20,369,000 pounds, a decrease of 18 percent from the January-June 1939 total; canned sardines, 7,404,000 pounds, a drop of 44 percent; canned crab meat, 9,747,000 pounds, a gain of 91 percent; pickled and salted herring, 17,247,000 pounds, a 6 percent drop; canned tuna, 4,392,000 pounds, a loss of 8 percent; and canned lobsters, 621,000 pounds, a 31 percent gain.

## Canada Restricts Fish Oil Exports

The Office of the American Commercial Attaché at Ottawa has reported that an order dated April 11, 1940, prohibits the export from Canada, except under license, of cod livers and cod-liver oil, for the purpose of conserving local supplies of these items.

An order dated June 20, 1940, extends this prohibition to all fish oils, fish livers, fish liver oils, and fish visceral oils. The Dominion has considered it necessary to conserve all oils having a vitamin content which may, when fortified with vitamins A and D, be substituted for cod-liver oil in the manufacture of feeding oils. It is believed that continuance of restricted export from Canada of such products would endanger the supply of vitamins necessary to meet the demands of Canadian consumers. Canada is deficient in the production of fish oils having a high vitamin content and the export demand for the limited production of fish livers has been extremely keen.

#### THE COVER PAGE

The halibut (Hippoglossus hippoglossus) is utilized in commercial fisheries on both Atlantic and Pacific coasts. The specimen shown on the cover page was caught off the coast of Alaska where the halibut resources are protected by regulations of the International Fisheries Commission. The photograph displays the under side of a halibut weighing about 350 pounds. To the end of June the 1940 landings of halibut on the Pacific Coast totaled 28,628,000 pounds. The photo used is by Ray Krantz, Seattle, Washington.

FISHERY TRADE INDICATORS  
(Expressed in Thousands of Pounds)

Item	Month	Latest month	Same month a year ago	Previous Month
<b>FRESH FISH LANDINGS</b>				
Boston, Mass. ....	June .....	17,001	21,839	13,765
Gloucester, Mass. ....	do .....	11,836	8,999	7,424
Portland, Me. ....	do .....	1,785	1,753	1,216
Boston, Gloucester, and Portland:				
Cod.....	do .....	2,951	6,969	3,313
Haddock.....	do .....	8,999	9,319	9,701
Pollock.....	do .....	1,062	574	525
Rosefish.....	do .....	9,900	10,259	5,503
Pacific Coast:				
Halibut, North Pacific ports.....	do .....	10,561	9,993	9,840
Halibut, Seattle.....	do .....	3,034	3,849	2,992
<b>FISH RECEIPTS, CHICAGO 1/</b>				
Salt-water fish.....	do .....	1,298	797	1,321
Fresh-water fish.....	do .....	2,340	2,015	2,758
Shellfish, etc. ....	do .....	1,044	819	1,069
By truck.....	do .....	1,371	1,180	1,650
By express.....	do .....	2,055	1,467	2,282
By freight.....	do .....	1,255	566	1,216
<b>COLD-STORAGE HOLDINGS 2/</b>				
New York, N. Y.:				
Salt-water fish.....	July .....	3,090	3,083	2,843
Fresh-water fish.....	do .....	1,595	1,798	1,402
Shellfish, etc. ....	do .....	1,047	1,816	656
Boston, Mass.:				
Salt-water fish.....	do .....	11,402	9,098	5,522
Fresh-water fish.....	do .....	17	28	8
Shellfish, etc. ....	do .....	960	1,575	826
Chicago, Ill.:				
Salt-water fish.....	do .....	901	1,192	816
Fresh-water fish.....	do .....	1,533	2,635	1,699
Shellfish, etc. ....	do .....	571	783	539
Unclassified.....	do .....	446	276	434
United States:				
Cod fillets.....	do .....	1,104	2,547	686
Haddock fillets.....	do .....	3,693	4,108	2,073
Halibut.....	do .....	11,884	8,810	7,154
Mackerel.....	do .....	6,783	1,858	2,213
Pollock fillets.....	do .....	441	375	557
Rosefish fillets.....	do .....	1,997	3,033	1,594
Salmon.....	do .....	2,891	2,293	1,350
Whiting.....	do .....	6,600	5,660	2,880
Shrimp.....	do .....	2,765	4,098	3,692
New England, all species.....	do .....	19,677	17,448	9,853
Middle Atlantic, all species.....	do .....	10,605	10,397	9,026
South Atlantic, all species.....	do .....	2,864	5,406	2,518
North Central East, all species.....	do .....	8,517	9,321	8,396
North Central West, all species.....	do .....	1,805	2,131	1,692
South Central, all species.....	do .....	1,352	1,285	1,497
Pacific, all species.....	do .....	17,259	13,952	12,139
<b>FOREIGN FISHERY TRADE 3/</b>				
Exports:				
All edible fishery commodities.....	June .....	7,338	4,906	4,578
Canned salmon.....	do .....	4,333	966	1,035
Canned sardines.....	do .....	1,970	2,374	2,470
Canned shrimp.....	do .....	161	425	155
Imports:				
All edible fishery commodities.....	do .....	20,097	24,632	19,900
Fresh-water fish and eels, fresh or frozen..	do .....	2,576	2,665	2,744
Canned tuna.....	do .....	294	647	343
Canned sardines.....	do .....	857	2,377	976
Cod, haddock, hake, etc., pickled or salted.	do .....	1,803	3,124	3,384
Herring, pickled or salted.....	do .....	298	507	379
Crab meat, sauce, etc. ....	do .....	630	793	48
Lobsters, not canned.....	do .....	3,468	2,938	3,865
Lobsters, canned.....	do .....	147	250	214

1/ Includes all arrivals as reported by express and rail terminals, and truck receipts as reported by wholesale dealers, including smokers.

2/ Data for individual cities are as of the last Thursday of the month, except those at Boston which are for the last Wednesday of the month, and those for geographical areas and the total of the United States which are as of the 15th of the month.

3/ From data compiled by the Bureau of Foreign and Domestic Commerce.

Note.--Data for the latest month are subject to revision.

PRINCIPAL FIELD OFFICES AND LABORATORIES  
OF THE U. S. BUREAU OF FISHERIES

Division of Fishery Industries

Boston, Mass. ....	B. E. Lindgren.....	253½ Northern Ave. Market News Service.....
Chicago, Ill. ....	E. C. Hinsdale.....	200 N. Jefferson St. Market News Service.....
College Park, Md. ....	J. M. Lemon.....	Horticultural Bldg., U. of Md. Fish. Tech. Laboratory....
Jacksonville, Fla. ....	S. C. Denham.....	309 Duval Bldg. Market News Service.....
New Orleans, La. ....	C. E. Peterson.....	1100 Decatur St. Market News Service.....
New York, N. Y. ....	W. H. Dumont.....	33-A Fulton St. Market News Service.....
San Pedro, Calif. ....	C. B. Tendick.....	Post Office Bldg. Fishery Statistics.....
Seattle, Wash. ....	V. J. Samson.....	421 Bell St. Terminal. Market News Service.....
Seattle, Wash. ....	R. W. Harrison.....	2725 Montlake Blvd. Fisheries Tech. Laboratory.....

Division of Fish Culture

LaCrosse, Wis. ....	C. F. Culler.....	Regional Headquarters.....
Seattle, Wash. ....	F. J. Foster.....	2725 Montlake Blvd. Regional Headquarters.....

Division of Scientific Inquiry

Ann Arbor, Mich. ....	Dr. John Van Costen.....	University Museums. Great Lakes Fish. Investigations
Beaufort, N. C. ....	Dr. Herbert F. Frytherch...	Fisheries Biological Laboratory.....
Cambridge, Mass. ....	W. C. Herrington.....	Room A-210 Harvard Biol. Lab. N. At. Fish. Investigations.
College Park, Md. ....	Robert A. Nesbit.....	Horticultural Bldg., U. of Md. Mid. & S. At. Fish. Invest.
Columbia, Mo. ....	Dr. M. M. Ellis.....	101 Willis Ave. Interior Waters Investigations....
Milford, Conn. ....	Dr. Victor Loosanoff.....	Fish. Laboratory. New England Oyster Investigations
New Orleans, La. ....	M. J. Lindner.....	336 Chartres St. Gulf Shrimp Investigations.....
Pensacola, Fla. ....	Dr. A. E. Hopkins.....	Box 1826. Gulf Oyster Investigations.....
Seattle, Wash. ....	Dr. F. A. Davidson.....	2725 Montlake Blvd. Fisheries Biological Laboratory.
Stanford University, Calif. ....	O. E. Sette.....	Room 450-B Jordan Hall. Pilchard Investigations.....

Division of Alaska Fisheries

Cordova, Alaska.....	Frederick G. Morton.....	Alaska Fisheries Service....
Juneau, Alaska.....	C. L. Olson.....	Federal Bldg., Alaska Fisheries Service.....
Ketchikan, Alaska.....	J. Steele Culbertson.....	Alaska Fisheries Service....
Seattle, Wash. ....	(Miss) Ted Murphy.....	706 Federal Bldg. Alaska Fisheries Service.....

### FISHERY INDUSTRIAL AND MARKETING PUBLICATIONS

There follows a list of some of the industrial or marketing publications of the Fish and Wildlife Service, which are available for purchase from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices quoted. Price List 21, the most complete list of Bureau sales publications, may be obtained from the Superintendent of Documents, free of charge.

#### INVESTIGATIONAL REPORTS

- No. 43. Some Effects of Ultraviolet Irradiation of Haddock Fillets. 1939. 5¢.
- No. 42. A Plan for the Development of the Hawaiian Fisheries. 1939. 10¢.
- No. 41. The Mineral Content of the Edible Portions of Some American Fishery Products. 1938. 5¢.
- No. 40. Pacific Salmon Oils. 1939. 5¢.
- No. 39. Trade in Fresh and Frozen Fishery Products and Related Marketing Considerations in the San Francisco Bay Area. 1938. 10¢.
- No. 38. Marketing of Shad on the Atlantic Coast. 1938. 10¢.
- No. 37. Preliminary Report on the Cause of the Decline of the Oyster Industry of the York River, Va., and the Effects of Pulp-mill Pollution on Oysters. 1938. 10¢.
- No. 32. Studies on Drying Cod and Haddock Waste. 1935. 5¢.
- No. 30. Effect of Manufacture on the Quality of Nonoily Fish Meals. 1935. 5¢.
- No. 28. Studies on the Utilization of Swordfish Livers. 1935. 5¢.
- No. 26. Fishery for Red Snappers and Groupers in the Gulf of Mexico. 1935. 5¢.
- No. 25. The Iodine Content of Some American Fishery Products. 1935. 5¢.
- No. 24. Modifications in Gear Curtail the Destruction of Undersized Fish in Otter Trawling. 1935. 5¢.
- No. 21. Shrimp Industry of the South Atlantic and Gulf States. 1934. 10¢.
- No. 20. Studies on the Smoking of Haddock. 1934. 5¢.
- No. 18. The Iodine Content of Oysters. 1934. 5¢.
- No. 16. Developments in Refrigeration of Fish in the United States. 1932. 5¢.
- No. 14. Fisheries of the Virgin Islands of the United States. 1932. 5¢.
- No. 13. Fisheries of Puerto Rico. 1932. 5¢.
- No. 7. Market for Marine Animal Oils in the United States. 1931. 15¢.
- No. 1. Menhaden Industry. 1931. 25¢.

#### FISHERY CIRCULARS

- No. 25. Natural History and Methods of Controlling the Common Oyster Drills. 1937. 5¢.
- No. 23. Decline in Haddock Abundance on Georges Bank and a Practical Remedy. 1936. 5¢.
- No. 22. Organizing and Incorporating Fishery Cooperative Marketing Associations. 1936. 5¢.
- No. 21. The Story of Oysters. 1936. 5¢.
- No. 19. Practical Fish Cookery. 1935. 5¢.
- No. 18. Conditions Affecting the Southern Winter Trawl Fishery. 1935. 5¢.
- No. 15. Aquatic Shell Industries. 1934. 5¢.
- No. 12. Introduction of Japanese Oysters into the United States. 1932. 5¢.
- No. 11. Some Unusual Markets for Fish and Shellfish. 1932. 5¢.
- No. 3. Market for Fresh Oysters in 14 Cities of the United States. 1931. 10¢.

#### ECONOMIC CIRCULARS

- No. 74. Application of Preservatives to Fishing Nets. 1931. 5¢.
- No. 69. Salmon—an Economical and Valuable Food. 1929. 10¢.

#### DOCUMENTS

- No. 1092. Pacific Salmon Fisheries. 1930. 65¢.
- No. 1078. Utilization of Shrimp Waste. 1930. 10¢.
- No. 1075. Net Preservative Treatments. 1930. 5¢.
- No. 1065. Bibliography on Cod-liver Oil in Animal Feeding. 1929. 10¢.
- No. 1059. Fishing Grounds of the Gulf of Maine. 1929. 25¢.

#### ADMINISTRATIVE REPORTS

- No. 37. Fishery Industries of the United States, 1938. 35¢.
- No. 36. Alaska Fishery and Fur-seal Industries in 1938. 15¢.
- No. 35. Progress in Biological Inquiries, 1938. 15¢.
- No. 34. Propagation and Distribution of Food Fishes, Fiscal Year 1938. 10¢.

ORDERS FOR THE ABOVE-LISTED PUBLICATIONS SHOULD BE FORWARDED DIRECT TO THE SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C., AND NOT TO THE FISH AND WILDLIFE SERVICE

## FISH COOKERY IN THE OPEN

Special Memorandum 3215-A

Many of the inconveniences and annoyances that usually accompany our camping experiences can be eliminated through enlargement of our knowledge of fish cookery. "Fish Cookery in the Open" provides an opportunity to increase this knowledge.

This 25-page leaflet contains instructions for making and utilizing adequate fires, for preparing fish for cooking, and for cooking fish and shellfish. Recipes are included which cover frying, broiling, boiling, and baking fish, preparing sauces, making chowders, and cooking crawfish, shrimp, frog legs, crabs, clams, and oysters. The pamphlet also contains a generous offering of suggestions on other phases of camp operation and equipage.

Among the appetizing recipes appearing in this memorandum is the following:

### Fish Chowder

3 pounds lean fish, cleaned, scaled, and with heads off	2/3 cup diced salt pork 1 quart milk
3 cups sliced potatoes	2 teaspoons salt
2/3 cup sliced onions	1/4 teaspoon pepper
2 cups water	

Dried whole milk prepared for general use may be substituted for fresh milk, increasing salt to about 3 teaspoons.

In a kettle of at least 1 gallon capacity, fry the pork to a golden brown, add the onions and fry to a light yellow. Then add the potatoes, seasoning, and water; mix the whole. Lay the fish on top and cook about 5 minutes or until flesh can be separated from bones and skin. Lift the fish out carefully, separate flesh from skin, fins, and all bones. Return clear flesh to kettle, stir just enough to mix with the potatoes and cook until the latter are soft. Add warm (but not boiled) milk. Add hard crackers just before serving.

"Fish Cookery in the Open" may be obtained upon request from the Bureau of Fisheries, Washington, D. C.

